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ACIDIC PRECIPITATION IN ONTARIO STUDY

ANNUAL STATISTICS OF CONCENTRATION CUMULATIVE AMBIENT AIR MONITORING NETWORK, 1985

ARB-086-87-AQM

APIOS-013-87

MAY 1987

Ontario
Ministry of the Environment

E. PICHÉ, Director
Air Resources Branch

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Atmospheric Processes Studies Unit
Air Quality and Meteorology Section
Ontario Ministry of the Evironment
Air Resources Branch
880 Bay Street, 4th Floor
Toronto, Ontario, Canada
M5S 1Z8

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A.P.I.O.S. Coordination Office
Ontario Ministry of the Environment
6th Floor, 40 St. Clair Avenue West
Toronto, Ontario, Canada
M4V 1P5

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This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Scott Kennedy (in Southwestern Region), Steve Elliott (in Southeastern Region), Wim Smits (in Northwestern Region), Jeff Columbus (Northeastern Region) and J.P. Varto (in Central Region). Sample handling was carried out by Dan Orr and Errol Butler, and overall network coordination by Bill Bardswick of the Air Resources Branch. Chemical analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini and Barry Loescher. Invaluable clerical and computer assistance were provided by Koshy Mathew and William Chang respectively, of C.C and C. Computer Systems Inc. All enquiries regarding the reported data should be directed to Neville Reid, Coordinator, Atmospheric Deposition and Chemistry Program, at (416) 965-1634.

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PART I

INTRODUCTION

INTRODUCTION

This report was prepared by Diane Green. The statistical summaries presented in this report pertain to the 1985 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) cumulative ambient air monitoring network. The relevant data can be obtained on request from the Air Resources Branch of the Ontario Ministry of the Environment. Any sample of which sampling period is less that 23 days or greater than 33 days is not included in the statistics calculations. All available data are utilized in the calculations except results reported as being unreliable (i.e., results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedure is available from the Ministry upon request) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as may be encountered in calibration or when the samples cannot be re-analyzed to confirm the reported values). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. Results labelled as W are replaced by "zero". W is the level which the analytical technique cannot distinguish from zero. If a level is recorded less than one detection limit T, a value corresponding to one half the detection limit is utilized for statistical calculations as reported in the statistical summaries. Note that T is normally about ten times W, and values above the T criteria are considered to be precise and accurate. W corresponds to approximately one standard deviation of low level duplicate of real samples. In the presented statistics summaries, "Total Sulphur" is calculated by the summation of sulphur of "Sulphur Dioxide" and "Sulphate".

Beginning in 1985, "Sulphur Dioxide" is corrected by the addition of nylon filter sulfate.

The statistical summaries presented in Parts III to IV include number of samples, mean (arithmetic/geometric), standard deviation (arithmetic/geometric), maximum, minimum, quartiles These statistics are for an average sampling period.

PART II

STATION DESCRIPTION AND LOCATION MAP

FIGURE 1

LOCATION OF APIOS CUMULATIVE WET/DRY DEPOSITION NETWORK SITES

1. Colchester*
2. Merlin
3. Pt. Stanley*
4. Wilkesport*
5. Alvinston
6. Huron Park
7. Waterloo
8. Palmerston*
9. Shallow Lake*
10. Milton (removed March 1984)
11. Uxbridge*
12. Coldwater
13. Campbellford*
14. Cloyne*
    (replacing Kaladar, June 1983)
15. Smith's Falls*
16. Dalhousie Mills*
17. Golden Lake*
18. Wilberforce
19. Whitney
20. Dorset*
21. McKellar*
22. Mattawa*
23. Killarney*
24. Bear Island
25. Gowganda*
26. Azure Lake
    (replacing Ramsey, June 1983)
27. Moonbeam*
28. Attawapiskat
    (removed February 1984)
29. Winisk
30. Geraldton*
    (replacing Nakina, August 1983)
31. Dorion*
32. Quetico Centre*
33. Lac la Croix
34. Experimental Lakes Area
35. Ear Falls*
36. Pickle Lake*
37. Turkey Lake*
38. Moosonee*
    (installed October, 1985)
39. Otter Island*
    (operated only during "summer" periods)

* indicates both a dry and wet deposition network site

TABLE 1

APIOS CUMULATIVE WET/DRY DEPOSITION NETWORK SITE DESCRIPTIONS

MOE REGION	STATION NAME	STATION NUMBER	INSTRUMENTATION	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM GRID CO-ORDINATES (Northing)	(Easting)
Southwestern	Colchester	1041	MIC/Low-Volume Air	183	41°59'15"	82°55'41"	4650000	340300
	Merlin	1051	MIC	191	42°14'47"	82°13'30"	4676400	398950
	Pt. Stanley	1061	MIC/Low-Volume Air	213	42°40'22"	81°09'55"	4724050	486700
	Wilkesport	1071	MIC/Low-Volume Air	183	42°42'11"	82°21'13"	4728350	389150
	Alvinston	1081	MIC	221	42°49'36"	81°50'04"	4942000	431550
	Shallow Lake	1091	MIC/Low-Volume Air	229	44°34'54"	81°05'24"	4936200	492850
	Palmerston	1101	MIC/Low-Volume Air	389	43°48'19"	80°54'12"	4850050	507750
	Huron Park	1191	MIC	250	43°17'28"	81°30'03"	4793000	459350
	Waterloo	2021	MIC	343	43°28'39"	80°35'09"	4813750	533500
Central	Dorset	3011	MIC/Low-Volume Air	320	45°13'26"	78°55'52"	5009650	662400
	Milton	3051	MIC	221	43°31'05"	79°55'54"	4818600	586350
	Uxbridge	3061	MIC/Low-Volume Air	244	44°12'46"	79°12'38"	4896800	643000
	Wilberforce	3071	MIC	396	45°00'54"	78°12'58"	4988150	719400
	Campbellford	3081	MIC/Low-Volume Air	175	44°17'28"	77°47'33"	4907600	277150
	Coldwater	3101	MIC	280	44°37'31"	79°32'08"	4942200	615900
Southeastern	Kaladar	4051	MIC/Low-Volume Air	244	44°41'31"	77°09'18"	4950800	329250
	Smith's Falls	4061	MIC/Low-Volume Air	122	44°56'41"	75°57'48"	4977100	423950
	Dalhousie Mills	4071	MIC/Low-Volume Air	69	45°19'00"	74°28'13"	5018100	541550
	Golden Lake	4081	MIC/Low-Volume Air	160	45°36'48"	77°12'03"	5053200	328400
	Cloyne	4091	MIC/Low-Volume Air	259	44°49'09"	77°11'45"	4964750	327100
Northeastern	McKellar	5011	MIC/Low-Volume Air	244	45°30'57"	79°55'19"	5040600	583950
	Killarney	5021	MIC/Low-Volume Air	183	45°59'26"	81°29'18"	5092900	462200
	Mattawa	5031	MIC/Low-Volume Air	198	46°16'45"	78°49'19"	5127150	667800
	Bear Island	5041	MIC	305	46°58'22"	80°04'40"	5202400	570350
	Ramsey	5051	MIC	427	47°26"33"	82°20'14"	5254900	399200
	Gowganda	5061	MIC/Low-Volume Air	343	47°39'04"	80°46'32"	5277300	516600
	Moonbeam	5071	MIC/Low-Volume Air	244	49°19'16"	82°08'46"	5463600	416650
	Attawapiskat	5081	MIC/Low-Volume Air	9	52°56'00"	82°24'00"	NA	NA
	Whitney	5091	MIC	412	45°32'21"	78°15'35"	5045950	713950
	Turkey Lake	5141	MIC/Low-Volume Air	472	47°03'15"	84°24'00"	5214250	696750
	Azure Lake	5151	MIC	244	47°28'12"	81°52'30"	5257650	434250
	Moosonee	5161	MIC/Low-Volume Air	8	51°12'34"	80°42'20"	5673000	520550
Northwestern	Dorion	6011	MIC/Low-Volume Air	244	48°50'33"	88°36'45"	5410800	382150
	Nakina	6021	MIC/Low-Volume Air	320	50°10'38"	86°42'90"	5558150	520950
	Ear Falls	6031	MIC/Low-Volume Air	350	50°38'31"	93°13'13"	5609800	484150
	Pickle Lake	6041	MIC/Low-Volume Air	360	51°27'41"	90°12'04"	5704800	694550
	Lac la Croix	6061	MIC	368	48°21'14"	92°12'32"	5355900	558400
	Quetico Centre	6071	MIC/Low-Volume Air	420	48°44'24"	91°12'08"	5399750	632100
	E.L.A.	6091	MIC	123	49°39'22"	93°43'28"	5500950	447350
	Winisk	6101	MIC	9	55°12'00"	85°08'00"	NA	NA
	Otter Island	6111	MIC/Low-Volume Air	204	48°06'50"	86°04'25"	5328750	569500
	Geraldton	6121	MIC/Low-Volume Air	351	49°48'05"	86°46'00"	5516300	516750

PART III

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	5	5	5	8	8	8	8	5	8
MAXIMUM	13.84	4.79	7.53	0.86	0.45	2.67	0.18	0.115	0.234
MINIMUM	2.31	1.82	1.87	0.27	0.23	0.48	0.02	0.049	0.053
RANGE	11.53	2.97	5.66	0.59	0.22	2.20	0.16	0.066	0.181
ARITH. MEAN	5.25	2.62	3.50	0.55	0.33	1.37	0.10	0.088	0.102
ARITH. STD. DEV	4.87	1.23	2.37	0.21	0.08	0.84	0.06	0.030	0.060
GEOM. MEAN	4.08	2.45	3.01	0.51	0.32	1.14	0.08	0.083	0.090
GEOM. STD. DEV.	2.07	1.48	1.79	1.47	1.29	1.98	2.14	1.477	1.638
1ST QUARTILE	2.38	1.87	1.90	0.42	0.26	0.61	0.05	0.055	0.063
2ND QUARTILE	2.92	2.10	2.19	0.49	0.33	1.22	0.11	0.083	0.087
3RD QUARTILE	3.81	2.29	3.09	0.71	0.39	2.09	0.15	0.106	0.114

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	8	8	8	8	8	8	8	8	8
MAXIMUM	0.313	0.402	0.059	0.015	0.0030	0.00421	0.0016	0.022	0.00069
MINIMUM	0.062	0.041	0.019	0.003	0.0015	0.00089	0.0006	0.006	0.00016
RANGE	0.251	0.361	0.039	0.012	0.0016	0.00332	0.0010	0.016	0.00052
ARITH. MEAN	0.166	0.206	0.034	0.007	0.0021	0.00308	0.0011	0.011	0.00046
ARITH. STD. DEV	0.093	0.155	0.012	0.004	0.0006	0.00134	0.0004	0.005	0.00017
GEOM. MEAN	0.143	0.147	0.033	0.006	0.0020	0.00268	0.0010	0.010	0.00043
GEOM. STD. DEV.	1.839	2.588	1.400	1.855	1.3277	1.88553	1.4272	1.524	1.58355
1ST QUARTILE	0.086	0.065	0.028	0.004	0.0016	0.00215	0.0008	0.007	0.00035
2ND QUARTILE	0.147	0.173	0.031	0.006	0.0020	0.00358	0.0010	0.010	0.00051
3RD QUARTILE	0.245	0.364	0.040	0.011	0.0026	0.00401	0.0015	0.013	0.00058

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CLOYNE/CUMULATIVE/LO-VOL #14

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	8	8	8	12	12	12	12	8	12
MAXIMUM	8.58	3.29	5.18	0.61	1.46	0.49	0.19	0.267	0.439
MINIMUM	1.50	1.38	1.21	0.18	0.15	0.02	0.01	0.045	0.045
RANGE	7.08	1.91	3.97	0.42	1.31	0.46	0.18	0.222	0.395
ARITH. MEAN	4.34	2.16	2.89	0.42	0.39	0.24	0.06	0.118	0.162
ARITH. STD. DEV	2.40	0.67	1.39	0.15	0.36	0.13	0.05	0.092	0.132
GEOM. MEAN	3.78	2.07	2.61	0.39	0.31	0.20	0.05	0.094	0.120
GEOM. STD. DEV.	1.77	1.36	1.63	1.50	1.89	2.19	1.96	1.977	2.237
1ST QUARTILE	2.75	1.62	2.02	0.29	0.20	0.16	0.04	0.060	0.054
2ND QUARTILE	3.46	2.01	2.29	0.42	0.26	0.23	0.05	0.072	0.135
3RD QUARTILE	6.12	2.69	4.06	0.56	0.46	0.34	0.06	0.182	0.226

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	12	12	12	12	12	12	12	12	12
MAXIMUM	0.176	0.183	0.034	0.016	0.0171	0.01318	0.0029	0.029	0.00220
MINIMUM	0.054	0.029	0.002	0.004	0.0012	0.00025	0.0004	0.005	0.00011
RANGE	0.122	0.154	0.031	0.013	0.0159	0.01293	0.0026	0.025	0.00208
ARITH. MEAN	0.101	0.082	0.019	0.007	0.0044	0.00334	0.0013	0.013	0.00052
ARITH. STD. DEV	0.039	0.042	0.009	0.003	0.0046	0.00332	0.0008	0.007	0.00054
GEOM. MEAN	0.095	0.072	0.016	0.006	0.0032	0.00235	0.0011	0.012	0.00040
GEOM. STD. DEV.	1.446	1.701	2.030	1.484	2.1717	2.54164	1.8337	1.641	2.01104
1ST QUARTILE	0.074	0.059	0.013	0.005	0.0017	0.00149	0.0007	0.008	0.00030
2ND QUARTILE	0.091	0.074	0.019	0.005	0.0027	0.00286	0.0011	0.012	0.00039
3RD QUARTILE	0.115	0.106	0.026	0.007	0.0042	0.00318	0.0017	0.017	0.00051

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL #1

PERIOD OF REPORT : JAN 1,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	12	12	12	13	13	13	13	12	13
MAXIMUM	17.30	8.05	11.33	2.02	1.26	1.45	0.42	0.333	1.855
MINIMUM	6.61	2.18	4.82	0.85	0.48	0.55	0.11	0.041	0.050
RANGE	10.69	5.87	6.51	1.18	0.78	0.90	0.32	0.292	1.805
ARITH. MEAN	11.03	4.83	7.12	1.25	0.72	0.88	0.27	0.130	0.287
ARITH. STD. DEV	3.59	1.99	1.78	0.32	0.28	0.29	0.11	0.089	0.487
GEOM. MEAN	10.50	4.42	6.94	1.21	0.68	0.84	0.24	0.109	0.156
GEOM. STD. DEV.	1.39	1.58	1.27	1.27	1.41	1.38	1.58	1.839	2.594
1ST QUARTILE	7.72	2.82	5.75	1.03	0.53	0.63	0.19	0.078	0.090
2ND QUARTILE	10.51	5.21	7.30	1.17	0.58	0.80	0.23	0.095	0.114
3RD QUARTILE	14.19	5.92	7.85	1.29	0.69	1.00	0.33	0.157	0.142

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	12	13	12	13
MAXIMUM	0.587	0.851	0.058	0.023	0.0128	0.00551	0.0046	0.077	0.00346
MINIMUM	0.133	0.084	0.026	0.007	0.0015	0.00173	0.0003	0.020	0.00020
RANGE	0.454	0.768	0.031	0.016	0.0113	0.00378	0.0043	0.057	0.00326
ARITH. MEAN	0.291	0.283	0.044	0.012	0.0047	0.00322	0.0023	0.048	0.00104
ARITH. STD. DEV	0.138	0.213	0.011	0.005	0.0033	0.00119	0.0012	0.017	0.00082
GEOM. MEAN	0.264	0.229	0.043	0.011	0.0038	0.00304	0.0019	0.045	0.00081
GEOM. STD. DEV.	1.581	1.942	1.298	1.447	1.9398	1.43186	2.0596	1.477	2.14874
1ST QUARTILE	0.173	0.146	0.033	0.009	0.0019	0.00236	0.0013	0.039	0.00058
2ND QUARTILE	0.254	0.198	0.042	0.010	0.0041	0.00297	0.0022	0.049	0.00090
3RD QUARTILE	0.326	0.309	0.053	0.013	0.0048	0.00388	0.0027	0.055	0.00110

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

PERIOD OF REPORT : JAN 29,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M***3	SULPHATE UG/M***3	TOTAL SULPHUR UG/M***3	TOTAL N -NITRATE UG/M***3	CHLORIDE UG/M***3	CALCIUM UG/M***3	MAGNESIM UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3
# OF SAMPLES	6	6	6	10	10	10	10	6	10
MAXIMUM	11.90	4.48	6.98	1.15	1.18	1.45	0.17	1.118	0.722
MINIMUM	1.93	1.79	1.56	0.15	0.32	0.28	0.07	0.113	0.091
RANGE	9.97	2.70	5.42	1.01	0.86	1.17	0.10	1.005	0.630
ARITH. MEAN	6.56	3.15	4.33	0.59	0.56	1.00	0.11	0.378	0.267
ARITH. STD. DEV	4.33	0.87	2.30	0.29	0.32	0.37	0.03	0.377	0.233
GEOM. MEAN	5.16	3.05	3.75	0.52	0.50	0.92	0.11	0.275	0.200
GEOM. STD. DEV.	2.25	1.35	1.86	1.80	1.60	1.64	1.30	2.278	2.144
1ST QUARTILE	1.99	2.38	1.86	0.38	0.36	0.66	0.08	0.129	0.099
2ND QUARTILE	6.47	3.13	4.48	0.55	0.43	1.08	0.12	0.251	0.176
3RD QUARTILE	9.50	3.30	6.02	0.66	0.49	1.27	0.12	0.345	0.267

	IRON UG/M***3	ALUMINUM UG/M***3	LEAD UG/M***3	MANGANSE UG/M***3	COPPER UG/M***3	NICKEL UG/M***3	VANADIUM UG/M***3	ZINC UG/M***3	CADMIUM UG/M***3
# OF SAMPLES	10	10	10	10	10	10	10	10	10
MAXIMUM	0.321	0.336	0.090	0.054	0.0098	0.01233	0.0320	0.051	0.00126
MINIMUM	0.094	0.083	0.022	0.006	0.0020	0.00152	0.0011	0.012	0.00010
RANGE	0.227	0.253	0.068	0.049	0.0077	0.01081	0.0309	0.039	0.00116
ARITH. MEAN	0.196	0.205	0.052	0.025	0.0054	0.00439	0.0059	0.032	0.00068
ARITH. STD. DEV	0.059	0.086	0.022	0.018	0.0026	0.00326	0.0093	0.012	0.00034
GEOM. MEAN	0.187	0.187	0.048	0.019	0.0048	0.00358	0.0034	0.029	0.00057
GEOM. STD. DEV.	1.383	1.597	1.578	2.365	1.6685	1.90899	2.4635	1.590	2.07681
1ST QUARTILE	0.149	0.122	0.031	0.007	0.0031	0.00196	0.0019	0.021	0.00039
2ND QUARTILE	0.205	0.193	0.057	0.020	0.0051	0.00316	0.0029	0.032	0.00066
3RD QUARTILE	0.214	0.264	0.065	0.037	0.0068	0.00512	0.0037	0.037	0.00085

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/LO-VOL #31

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	11	12	11	13	13	13	13	12	13
MAXIMUM	1.31	3.33	1.53	0.72	0.20	0.53	0.46	0.097	0.351
MINIMUM	0.17	0.56	0.37	0.03	0.06	0.07	0.02	0.029	0.003
RANGE	1.14	2.77	1.17	0.69	0.14	0.47	0.43	0.068	0.348
ARITH. MEAN	0.55	1.42	0.75	0.14	0.12	0.23	0.16	0.059	0.117
ARITH. STD. DEV	0.36	0.78	0.39	0.18	0.04	0.14	0.16	0.020	0.088
GEOM. MEAN	0.45	1.26	0.68	0.10	0.11	0.20	0.10	0.056	0.079
GEOM. STD. DEV.	1.97	1.68	1.60	2.22	1.40	1.90	2.79	1.446	3.242
1ST QUARTILE	0.19	0.82	0.44	0.06	0.09	0.12	0.05	0.044	0.054
2ND QUARTILE	0.45	1.28	0.59	0.09	0.11	0.21	0.07	0.063	0.105
3RD QUARTILE	0.69	1.73	0.85	0.10	0.14	0.26	0.24	0.073	0.126

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	13	13	13	13
MAXIMUM	0.286	0.927	0.083	0.013	0.0051	0.00943	0.0035	0.027	0.00099
MINIMUM	0.017	0.029	0.003	0.001	0.0006	0.00063	0.0004	0.002	0.00002
RANGE	0.270	0.899	0.080	0.011	0.0045	0.00880	0.0031	0.025	0.00098
ARITH. MEAN	0.113	0.273	0.012	0.005	0.0025	0.00242	0.0011	0.008	0.00036
ARITH. STD. DEV	0.087	0.299	0.022	0.004	0.0015	0.00261	0.0008	0.006	0.00026
GEOM. MEAN	0.081	0.146	0.007	0.004	0.0020	0.00169	0.0009	0.007	0.00026
GEOM. STD. DEV.	2.469	3.319	2.511	2.070	2.0425	2.25911	1.7771	2.040	2.72198
1ST QUARTILE	0.044	0.051	0.003	0.002	0.0012	0.00079	0.0006	0.004	0.00018
2ND QUARTILE	0.075	0.098	0.005	0.003	0.0023	0.00148	0.0008	0.008	0.00027
3RD QUARTILE	0.159	0.383	0.007	0.007	0.0028	0.00198	0.0011	0.009	0.00044

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL #20

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	8	9	8	11	11	11	11	9	11
MAXIMUM	6.66	5.01	4.08	0.57	0.83	0.38	0.10	0.192	0.172
MINIMUM	1.15	1.85	1.50	0.16	0.13	0.07	0.03	0.044	0.065
RANGE	5.51	3.16	2.58	0.41	0.69	0.31	0.08	0.149	0.107
ARITH. MEAN	3.37	2.65	2.58	0.33	0.24	0.23	0.05	0.091	0.109
ARITH. STD. DEV	2.04	0.99	1.01	0.12	0.20	0.11	0.02	0.053	0.035
GEOM. MEAN	2.86	2.52	2.42	0.31	0.21	0.20	0.04	0.080	0.103
GEOM. STD. DEV.	1.86	1.37	1.48	1.42	1.63	1.70	1.53	1.650	1.388
1ST QUARTILE	1.86	2.03	1.72	0.24	0.15	0.12	0.03	0.057	0.070
2ND QUARTILE	2.83	2.21	2.27	0.29	0.19	0.19	0.04	0.068	0.105
3RD QUARTILE	4.89	2.66	3.55	0.39	0.21	0.31	0.05	0.079	0.129

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	11	11	11	11	11	10	11	11	11
MAXIMUM	0.214	0.290	0.022	0.009	0.0050	0.00805	0.0059	0.022	0.00108
MINIMUM	0.024	0.022	0.007	0.001	0.0008	0.00089	0.0004	0.008	0.00026
RANGE	0.191	0.268	0.015	0.008	0.0042	0.00716	0.0055	0.014	0.00081
ARITH. MEAN	0.088	0.094	0.016	0.004	0.0033	0.00350	0.0014	0.013	0.00052
ARITH. STD. DEV	0.056	0.082	0.005	0.002	0.0014	0.00248	0.0015	0.004	0.00023
GEOM. MEAN	0.073	0.069	0.015	0.004	0.0029	0.00279	0.0011	0.013	0.00048
GEOM. STD. DEV.	1.911	2.299	1.426	1.766	1.7648	2.04875	2.0640	1.329	1.50947
1ST QUARTILE	0.039	0.030	0.011	0.003	0.0020	0.00148	0.0006	0.010	0.00031
2ND QUARTILE	0.073	0.059	0.015	0.004	0.0028	0.00264	0.0010	0.013	0.00048
3RD QUARTILE	0.108	0.120	0.020	0.005	0.0046	0.00426	0.0013	0.015	0.00060

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL #35

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	12	13	12	13	13	13	13	13	13
MAXIMUM	3.66	3.87	3.12	0.47	0.87	0.58	0.14	0.800	0.407
MINIMUM	0.08	0.13	0.19	0.03	0.07	0.04	0.01	0.003	0.044
RANGE	3.59	3.74	2.93	0.45	0.80	0.54	0.13	0.797	0.363
ARITH. MEAN	0.71	1.23	0.75	0.13	0.19	0.21	0.06	0.116	0.142
ARITH. STD. DEV	0.99	0.95	0.80	0.12	0.21	0.15	0.04	0.209	0.098
GEOM. MEAN	0.39	0.91	0.54	0.09	0.14	0.17	0.05	0.055	0.116
GEOM. STD. DEV.	2.97	2.41	2.19	2.31	1.88	2.12	2.11	3.425	1.957
1ST QUARTILE	0.21	0.47	0.32	0.04	0.10	0.12	0.04	0.042	0.059
2ND QUARTILE	0.40	1.11	0.55	0.10	0.11	0.17	0.05	0.048	0.133
3RD QUARTILE	0.61	1.45	0.83	0.12	0.17	0.23	0.07	0.066	0.173

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	13	13	13	13
MAXIMUM	0.282	0.430	0.044	0.012	0.0153	0.02239	0.0122	0.051	0.00204
MINIMUM	0.022	0.011	0.002	0.001	0.0003	0.00036	0.0002	0.002	0.00004
RANGE	0.260	0.419	0.041	0.011	0.0150	0.02203	0.0120	0.049	0.00200
ARITH. MEAN	0.102	0.123	0.015	0.004	0.0030	0.00366	0.0023	0.010	0.00053
ARITH. STD. DEV	0.070	0.111	0.014	0.003	0.0040	0.00576	0.0034	0.013	0.00060
GEOM. MEAN	0.081	0.081	0.010	0.003	0.0017	0.00208	0.0012	0.006	0.00032
GEOM. STD. DEV.	2.090	2.871	2.530	1.934	2.9432	2.72651	3.2226	2.242	2.84294
1ST QUARTILE	0.042	0.043	0.004	0.002	0.0008	0.00116	0.0005	0.004	0.00017
2ND QUARTILE	0.092	0.107	0.009	0.003	0.0012	0.00193	0.0010	0.005	0.00024
3RD QUARTILE	0.121	0.131	0.013	0.003	0.0029	0.00285	0.0012	0.008	0.00043

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERALDTON/CUMULATIVE/LO-VOL 830

PERIOD OF REPORT : JAN 2,85 TO JAN 1,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	12	13	12	13	13	13	13	13	12
MAXIMUM	1.33	3.08	1.55	0.17	0.49	0.58	0.10	0.252	0.545
MINIMUM	0.10	0.55	0.27	0.04	0.03	0.06	0.02	0.016	0.059
RANGE	1.23	2.54	1.28	0.14	0.46	0.52	0.08	0.235	0.486
ARITH. MEAN	0.54	1.23	0.68	0.09	0.15	0.26	0.05	0.068	0.172
ARITH. STD. DEV	0.37	0.72	0.39	0.04	0.11	0.14	0.02	0.062	0.132
GEOM. MEAN	0.42	1.07	0.59	0.08	0.12	0.22	0.05	0.052	0.141
GEOM. STD. DEV.	2.30	1.69	1.70	1.60	1.85	1.87	1.60	2.036	1.859
1ST QUARTILE	0.22	0.63	0.37	0.06	0.10	0.15	0.03	0.031	0.090
2ND QUARTILE	0.51	1.02	0.55	0.09	0.13	0.26	0.05	0.049	0.146
3RD QUARTILE	0.71	1.28	0.82	0.10	0.14	0.30	0.06	0.068	0.194

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	13	13	13	13
MAXIMUM	0.132	0.130	0.026	0.005	0.0293	0.01626	0.0059	0.013	0.00166
MINIMUM	0.015	0.009	0.001	0.001	0.0008	0.00045	0.0003	0.001	0.00012
RANGE	0.116	0.121	0.025	0.004	0.0284	0.01581	0.0056	0.012	0.00154
ARITH. MEAN	0.057	0.055	0.007	0.003	0.0044	0.00387	0.0012	0.006	0.00046
ARITH. STD. DEV	0.037	0.039	0.007	0.001	0.0076	0.00461	0.0014	0.003	0.00043
GEOM. MEAN	0.046	0.041	0.004	0.002	0.0024	0.00239	0.0009	0.005	0.00034
GEOM. STD. DEV.	2.002	2.393	2.594	1.656	2.5474	2.69451	2.1177	2.209	2.11426
1ST QUARTILE	0.023	0.018	0.002	0.002	0.0012	0.00144	0.0005	0.004	0.00019
2ND QUARTILE	0.047	0.046	0.004	0.002	0.0018	0.00217	0.0009	0.005	0.00029
3RD QUARTILE	0.071	0.079	0.007	0.004	0.0032	0.00333	0.0012	0.006	0.00047

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	9	9	9	11	11	11	11	9	11
MAXIMUM	10.21	3.16	5.53	0.44	1.01	0.43	0.11	0.161	0.213
MINIMUM	1.15	0.07	0.97	0.11	0.13	0.07	0.03	0.031	0.043
RANGE	9.06	3.09	4.57	0.33	0.88	0.36	0.07	0.130	0.169
ARITH. MEAN	4.64	1.90	2.95	0.30	0.30	0.25	0.05	0.093	0.115
ARITH. STD. DEV	3.56	0.90	1.82	0.10	0.24	0.13	0.02	0.047	0.056
GEOM. MEAN	3.52	1.41	2.47	0.28	0.25	0.22	0.05	0.081	0.102
GEOM. STD. DEV.	2.22	3.19	1.90	1.50	1.71	1.87	1.42	1.751	1.706
1ST QUARTILE	1.83	1.42	1.43	0.20	0.18	0.14	0.04	0.053	0.055
2ND QUARTILE	2.60	1.83	2.12	0.32	0.23	0.22	0.04	0.082	0.111
3RD QUARTILE	6.21	2.35	3.80	0.36	0.28	0.36	0.06	0.106	0.143

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	11	11	11	11	11	11	11	11	11
MAXIMUM	0.189	0.230	0.069	0.009	0.0070	0.00506	0.0030	0.020	0.00068
MINIMUM	0.032	0.024	0.008	0.002	0.0010	0.00038	0.0006	0.002	0.00032
RANGE	0.157	0.206	0.060	0.007	0.0061	0.00468	0.0024	0.018	0.00035
ARITH. MEAN	0.091	0.086	0.026	0.004	0.0031	0.00223	0.0015	0.012	0.00051
ARITH. STD. DEV	0.049	0.065	0.019	0.002	0.0015	0.00142	0.0007	0.006	0.00014
GEOM. MEAN	0.080	0.068	0.021	0.004	0.0028	0.00178	0.0013	0.010	0.00049
GEOM. STD. DEV.	1.731	2.040	1.969	1.511	1.5869	2.12181	1.6315	2.071	1.33392
1ST QUARTILE	0.048	0.033	0.010	0.003	0.0024	0.00094	0.0009	0.006	0.00035
2ND QUARTILE	0.073	0.059	0.020	0.004	0.0028	0.00160	0.0012	0.011	0.00051
3RD QUARTILE	0.124	0.109	0.029	0.004	0.0033	0.00326	0.0018	0.016	0.00062

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/LO-VOL 825

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	12	13	12	13	13	13	13	13	13
MAXIMUM	7.23	3.08	4.41	0.32	0.45	0.53	0.10	0.248	0.208
MINIMUM	1.26	0.76	1.10	0.09	0.05	0.06	0.02	0.024	0.053
RANGE	5.97	2.32	3.31	0.23	0.40	0.47	0.08	0.224	0.154
ARITH. MEAN	3.34	1.75	2.26	0.19	0.21	0.19	0.05	0.076	0.126
ARITH. STD. DEV	1.61	0.75	0.96	0.08	0.10	0.14	0.02	0.064	0.047
GEOM. MEAN	3.01	1.59	2.10	0.17	0.19	0.16	0.05	0.059	0.117
GEOM. STD. DEV.	1.62	1.60	1.49	1.53	1.75	1.92	1.58	2.009	1.508
1ST QUARTILE	2.35	1.10	1.56	0.12	0.15	0.09	0.04	0.033	0.087
2ND QUARTILE	3.06	1.64	2.07	0.18	0.19	0.14	0.05	0.049	0.119
3RD QUARTILE	4.06	2.08	2.79	0.23	0.24	0.20	0.06	0.079	0.154

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	13	13	13	13
MAXIMUM	0.218	0.296	0.038	0.026	0.0120	0.01395	0.0009	0.015	0.00082
MINIMUM	0.019	0.011	0.005	0.002	0.0026	0.00055	0.0003	0.006	0.00029
RANGE	0.199	0.285	0.033	0.024	0.0094	0.01340	0.0006	0.010	0.00053
ARITH. MEAN	0.097	0.108	0.014	0.005	0.0061	0.00431	0.0006	0.010	0.00049
ARITH. STD. DEV	0.058	0.082	0.009	0.006	0.0027	0.00405	0.0002	0.003	0.00016
GEOM. MEAN	0.078	0.073	0.012	0.004	0.0056	0.00292	0.0006	0.009	0.00046
GEOM. STD. DEV.	2.128	2.879	1.721	2.044	1.5465	2.59927	1.5351	1.350	1.40240
1ST QUARTILE	0.038	0.025	0.009	0.002	0.0040	0.00173	0.0005	0.008	0.00031
2ND QUARTILE	0.092	0.096	0.012	0.003	0.0050	0.00282	0.0006	0.009	0.00047
3RD QUARTILE	0.126	0.132	0.013	0.004	0.0076	0.00379	0.0008	0.011	0.00057

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL 823

PERIOD OF REPORT : JAN 2,85 TO OCT 10,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	7	9	7	9	9	9	9	9	9
MAXIMUM	6.87	3.22	4.51	0.79	0.50	0.41	0.09	0.084	0.237
MINIMUM	1.89	0.23	1.71	0.18	0.17	0.06	0.03	0.028	0.037
RANGE	4.98	2.99	2.80	0.62	0.33	0.35	0.06	0.056	0.200
ARITH. MEAN	3.90	2.11	2.75	0.36	0.28	0.23	0.06	0.059	0.102
ARITH. STD. DEV	2.11	0.96	1.17	0.21	0.11	0.12	0.02	0.017	0.069
GEOM. MEAN	3.43	1.75	2.56	0.32	0.26	0.20	0.05	0.057	0.083
GEOM. STD. DEV.	1.73	2.27	1.49	1.70	1.43	1.90	1.39	1.389	1.967
1ST QUARTILE	1.90	1.58	1.76	0.21	0.19	0.15	0.04	0.050	0.041
2ND QUARTILE	2.92	2.01	2.10	0.24	0.24	0.21	0.05	0.055	0.075
3RD QUARTILE	5.40	2.66	3.51	0.43	0.29	0.27	0.06	0.069	0.119

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	9	9	9	9	9	9	8	9	9
MAXIMUM	0.187	0.204	0.041	0.008	0.0129	0.00677	0.0050	0.014	0.00117
MINIMUM	0.026	0.017	0.008	0.003	0.0014	0.00086	0.0007	0.005	0.00014
RANGE	0.161	0.187	0.033	0.005	0.0115	0.00592	0.0043	0.009	0.00103
ARITH. MEAN	0.106	0.104	0.020	0.005	0.0064	0.00339	0.0015	0.010	0.00051
ARITH. STD. DEV	0.046	0.059	0.012	0.002	0.0042	0.00227	0.0015	0.003	0.00030
GEOM. MEAN	0.094	0.085	0.017	0.005	0.0050	0.00264	0.0011	0.010	0.00044
GEOM. STD. DEV.	1.780	2.131	1.729	1.412	2.2557	2.22408	1.9466	1.389	1.85075
1ST QUARTILE	0.075	0.053	0.011	0.004	0.0026	0.00120	0.0007	0.008	0.00031
2ND QUARTILE	0.105	0.093	0.015	0.005	0.0052	0.00232	0.0009	0.010	0.00045
3RD QUARTILE	0.124	0.128	0.018	0.005	0.0076	0.00511	0.0013	0.012	0.00054

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HATTAWA/CUMULATIVE/LO-VOL #22

PERIOD OF REPORT : JAN 2,85 TO DEC 3,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	6	7	6	7	7	7	7	7	7
MAXIMUM	3.89	3.16	3.08	0.29	1.00	0.54	0.15	0.501	0.544
MINIMUM	0.67	0.69	0.91	0.10	0.19	0.14	0.04	0.062	0.053
RANGE	3.22	2.47	2.08	0.19	0.81	0.40	0.11	0.439	0.491
ARITH. MEAN	2.72	2.03	2.01	0.22	0.38	0.33	0.08	0.161	0.162
ARITH. STD. DEV	1.14	0.89	0.76	0.08	0.28	0.14	0.04	0.161	0.174
GEOM. MEAN	2.40	1.82	1.87	0.20	0.33	0.30	0.08	0.118	0.115
GEOM. STD. DEV.	1.90	1.72	1.54	1.51	1.73	1.63	1.64	2.169	2.259
1ST QUARTILE	1.60	0.95	1.20	0.12	0.21	0.15	0.04	0.063	0.058
2ND QUARTILE	2.81	1.89	2.09	0.22	0.27	0.33	0.08	0.084	0.081
3RD QUARTILE	3.26	2.69	2.45	0.27	0.35	0.38	0.10	0.165	0.157

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	7	7	7	7	7	7	7	7	7
MAXIMUM	0.346	0.437	0.041	0.011	0.0105	0.01590	0.0033	0.046	0.00151
MINIMUM	0.151	0.032	0.012	0.006	0.0018	0.00173	0.0006	0.006	0.00020
RANGE	0.195	0.405	0.029	0.005	0.0086	0.01417	0.0028	0.040	0.00131
ARITH. MEAN	0.253	0.286	0.028	0.007	0.0060	0.00438	0.0013	0.016	0.00054
ARITH. STD. DEV	0.062	0.144	0.011	0.002	0.0027	0.00512	0.0009	0.014	0.00044
GEOM. MEAN	0.245	0.226	0.026	0.007	0.0054	0.00314	0.0012	0.013	0.00044
GEOM. STD. DEV.	1.308	2.513	1.595	1.267	1.7335	2.12541	1.7192	1.871	1.85791
1ST QUARTILE	0.178	0.100	0.014	0.006	0.0030	0.00194	0.0007	0.008	0.00027
2ND QUARTILE	0.250	0.300	0.027	0.006	0.0060	0.00229	0.0010	0.011	0.00038
3RD QUARTILE	0.283	0.382	0.036	0.008	0.0069	0.00316	0.0013	0.015	0.00048

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL #21

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	8	9	8	9	9	9	9	9	9
MAXIMUM	10.79	6.28	6.45	0.83	0.75	0.49	0.12	0.143	0.558
MINIMUM	2.47	0.93	1.75	0.16	0.22	0.03	0.03	0.028	0.105
RANGE	8.32	5.35	4.70	0.67	0.53	0.46	0.09	0.115	0.453
ARITH. MEAN	5.73	2.82	3.83	0.43	0.45	0.24	0.06	0.074	0.269
ARITH. STD. DEV	3.50	1.55	1.95	0.22	0.19	0.17	0.03	0.039	0.140
GEOM. MEAN	4.85	2.48	3.39	0.38	0.41	0.17	0.06	0.065	0.240
GEOM. STD. DEV.	1.86	1.72	1.71	1.69	1.55	2.56	1.62	1.731	1.661
1ST QUARTILE	2.71	1.75	2.03	0.24	0.27	0.09	0.04	0.039	0.181
2ND QUARTILE	4.92	2.41	3.43	0.38	0.39	0.16	0.05	0.066	0.231
3RD QUARTILE	8.65	3.04	5.77	0.46	0.50	0.34	0.07	0.084	0.257

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	9	9	9	9	9	9	9	9	9
MAXIMUM	0.235	0.345	0.092	0.011	0.0239	0.01930	0.0054	0.027	0.00340
MINIMUM	0.036	0.012	0.004	0.001	0.0023	0.00099	0.0005	0.004	0.00012
RANGE	0.199	0.332	0.088	0.009	0.0217	0.01831	0.0049	0.024	0.00328
ARITH. MEAN	0.096	0.101	0.029	0.005	0.0078	0.00562	0.0015	0.013	0.00083
ARITH. STD. DEV	0.073	0.109	0.026	0.003	0.0067	0.00557	0.0015	0.008	0.00098
GEOM. MEAN	0.076	0.059	0.021	0.004	0.0060	0.00404	0.0011	0.011	0.00057
GEOM. STD. DEV.	2.021	3.095	2.429	1.873	2.0909	2.30880	2.0227	2.076	2.36807
1ST QUARTILE	0.043	0.020	0.013	0.003	0.0034	0.00269	0.0007	0.005	0.00041
2ND QUARTILE	0.051	0.054	0.023	0.003	0.0050	0.00317	0.0009	0.013	0.00059
3RD QUARTILE	0.111	0.105	0.028	0.006	0.0085	0.00512	0.0011	0.015	0.00065

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HOORBEAM/CUMULATIVE/LO-VOL 827

PERIOD OF REPORT : JAN 3,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	11	12	11	12	12	12	12	12	12
MAXIMUM	1.86	2.72	1.68	0.17	0.43	0.95	0.21	0.174	0.268
MINIMUM	1.06	0.55	0.73	0.04	0.11	0.07	0.02	0.030	0.042
RANGE	0.80	2.17	0.95	0.14	0.32	0.88	0.19	0.144	0.226
ARITH. MEAN	1.39	1.50	1.20	0.10	0.20	0.43	0.10	0.060	0.126
ARITH. STD. DEV	0.31	0.74	0.32	0.05	0.09	0.32	0.07	0.041	0.079
GEOM. MEAN	1.36	1.30	1.16	0.09	0.18	0.32	0.08	0.052	0.107
GEOM. STD. DEV.	1.24	1.79	1.32	1.76	1.48	2.38	2.29	1.670	1.809
1ST QUARTILE	1.08	0.67	0.87	0.06	0.14	0.16	0.05	0.036	0.076
2ND QUARTILE	1.32	1.54	1.08	0.12	0.18	0.29	0.07	0.046	0.098
3RD QUARTILE	1.63	2.12	1.46	0.14	0.23	0.74	0.18	0.069	0.175

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	12	12	12	12	12	12	12	12	12
MAXIMUM	0.248	0.390	0.023	0.032	0.0072	0.02165	0.0015	0.012	0.00060
MINIMUM	0.019	0.010	0.003	0.001	0.0001	0.00133	0.0003	0.003	0.00011
RANGE	0.228	0.380	0.021	0.031	0.0070	0.02032	0.0011	0.010	0.00049
ARITH. MEAN	0.113	0.135	0.011	0.006	0.0036	0.00404	0.0008	0.008	0.00035
ARITH. STD. DEV	0.072	0.123	0.007	0.009	0.0020	0.00563	0.0003	0.003	0.00012
GEOM. MEAN	0.089	0.078	0.009	0.004	0.0027	0.00272	0.0007	0.007	0.00032
GEOM. STD. DEV.	2.159	3.488	2.072	2.423	2.9383	2.13776	1.5215	1.512	1.51885
1ST QUARTILE	0.064	0.044	0.005	0.003	0.0021	0.00167	0.0006	0.006	0.00028
2ND QUARTILE	0.085	0.079	0.010	0.004	0.0038	0.00229	0.0007	0.008	0.00033
3RD QUARTILE	0.172	0.239	0.017	0.006	0.0047	0.00390	0.0009	0.010	0.00042

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : OTTER ISLAND/CUMULATIVE/LO-VOL #39

PERIOD OF REPORT : APR 23,85 TO NOV 5,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	7	7	7	7	7	7	7	7	7
MAXIMUM	1.57	2.02	0.99	0.23	0.16	0.29	0.04	0.084	0.387
MINIMUM	0.33	0.31	0.42	0.06	0.01	0.08	0.01	0.019	0.020
RANGE	1.23	1.71	0.57	0.17	0.15	0.21	0.03	0.066	0.367
ARITH. MEAN	0.87	1.00	0.77	0.15	0.10	0.17	0.02	0.051	0.117
ARITH. STD. DEV	0.40	0.65	0.20	0.06	0.05	0.07	0.01	0.023	0.127
GEOM. MEAN	0.79	0.83	0.74	0.13	0.08	0.15	0.02	0.046	0.078
GEOM. STD. DEV.	1.65	1.94	1.35	1.57	2.82	1.56	1.59	1.686	2.572
1ST QUARTILE	0.48	0.42	0.52	0.08	0.05	0.09	0.01	0.024	0.035
2ND QUARTILE	0.76	0.71	0.77	0.14	0.11	0.15	0.02	0.049	0.057
3RD QUARTILE	1.04	1.35	0.90	0.18	0.12	0.20	0.03	0.062	0.124

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	7	7	7	7	7	7	7	7	7
MAXIMUM	0.085	0.095	0.016	0.004	0.0046	0.00273	0.0009	0.010	0.00115
MINIMUM	0.030	0.017	0.001	0.001	0.0005	0.00024	0.0002	0.001	0.00015
RANGE	0.055	0.078	0.015	0.003	0.0041	0.00248	0.0006	0.009	0.00100
ARITH. MEAN	0.053	0.039	0.007	0.003	0.0017	0.00155	0.0005	0.005	0.00037
ARITH. STD. DEV	0.023	0.028	0.005	0.001	0.0014	0.00086	0.0003	0.003	0.00036
GEOM. MEAN	0.049	0.033	0.005	0.003	0.0013	0.00126	0.0005	0.005	0.00028
GEOM. STD. DEV.	1.543	1.897	2.859	1.570	2.1770	2.24956	1.7331	1.919	2.00630
1ST QUARTILE	0.030	0.017	0.002	0.001	0.0006	0.00058	0.0002	0.003	0.00016
2ND QUARTILE	0.044	0.026	0.005	0.003	0.0009	0.00144	0.0005	0.005	0.00021
3RD QUARTILE	0.070	0.047	0.009	0.003	0.0021	0.00202	0.0007	0.006	0.00034

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL 85

PERIOD OF REPORT : DEC 31,84 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	12	12	12	13	13	13	13	12	13
MAXIMUM	13.84	8.06	7.95	1.80	1.33	1.31	0.40	0.434	2.823
MINIMUM	0.75	1.47	2.21	0.66	0.20	0.14	0.04	0.034	0.060
RANGE	13.09	6.59	5.74	1.15	1.13	1.18	0.36	0.401	2.763
ARITH. MEAN	5.85	4.18	4.32	0.99	0.48	0.72	0.20	0.140	0.304
ARITH. STD. DEV	4.10	1.98	2.19	0.34	0.29	0.35	0.12	0.129	0.757
GEOM. MEAN	4.44	3.74	3.86	0.94	0.43	0.62	0.17	0.101	0.119
GEOM. STD. DEV.	2.33	1.67	1.63	1.36	1.60	1.88	2.04	2.274	2.693
1ST QUARTILE	2.69	2.81	2.43	0.76	0.33	0.48	0.12	0.049	0.072
2ND QUARTILE	5.19	4.08	3.62	0.80	0.38	0.62	0.18	0.092	0.088
3RD QUARTILE	8.31	5.09	6.19	1.14	0.43	0.91	0.23	0.198	0.122

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	12	13	13	13
MAXIMUM	0.388	0.530	0.048	0.016	0.0103	0.00420	0.0042	0.038	0.00213
MINIMUM	0.018	0.027	0.008	0.004	0.0011	0.00113	0.0003	0.010	0.00015
RANGE	0.370	0.503	0.039	0.013	0.0093	0.00307	0.0039	0.028	0.00197
ARITH. MEAN	0.166	0.185	0.028	0.008	0.0034	0.00275	0.0018	0.020	0.00067
ARITH. STD. DEV	0.108	0.159	0.011	0.004	0.0030	0.00095	0.0010	0.008	0.00051
GEOM. MEAN	0.129	0.133	0.026	0.007	0.0027	0.00258	0.0015	0.019	0.00055
GEOM. STD. DEV.	2.298	2.404	1.597	1.610	1.9454	1.47526	1.9483	1.472	1.88519
1ST QUARTILE	0.075	0.067	0.019	0.005	0.0017	0.00200	0.0012	0.013	0.00037
2ND QUARTILE	0.165	0.147	0.027	0.006	0.0023	0.00300	0.0016	0.019	0.00051
3RD QUARTILE	0.198	0.203	0.033	0.009	0.0030	0.00328	0.0020	0.022	0.00063

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL 836

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	9	10	9	11	11	11	11	11	11
MAXIMUM	1.71	1.81	1.46	0.11	0.22	0.63	0.19	1.999	0.660
MINIMUM	0.10	0.39	0.18	0.02	0.09	0.01	0.03	0.007	0.044
RANGE	1.60	1.42	1.28	0.09	0.13	0.62	0.16	1.992	0.616
ARITH. MEAN	0.46	0.95	0.54	0.06	0.15	0.32	0.07	0.219	0.263
ARITH. STD. DEV	0.49	0.47	0.39	0.03	0.04	0.21	0.05	0.592	0.226
GEOM. MEAN	0.32	0.84	0.45	0.06	0.14	0.22	0.06	0.039	0.184
GEOM. STD. DEV.	2.30	1.71	1.88	1.60	1.31	3.04	1.89	4.739	2.501
1ST QUARTILE	0.17	0.45	0.29	0.04	0.11	0.12	0.04	0.015	0.077
2ND QUARTILE	0.28	0.96	0.34	0.06	0.14	0.26	0.04	0.025	0.160
3RD QUARTILE	0.42	1.25	0.62	0.07	0.16	0.48	0.10	0.050	0.415

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	11	11	11	11	11	11	10	11	11
MAXIMUM	0.242	0.263	0.039	0.009	0.0098	0.00884	0.0066	0.014	0.00548
MINIMUM	0.030	0.011	0.005	0.001	0.0013	0.00074	0.0002	0.002	0.00012
RANGE	0.213	0.252	0.034	0.007	0.0084	0.00810	0.0063	0.012	0.00536
ARITH. MEAN	0.096	0.089	0.016	0.003	0.0043	0.00331	0.0015	0.006	0.00078
ARITH. STD. DEV	0.073	0.082	0.011	0.002	0.0029	0.00271	0.0021	0.004	0.00157
GEOM. MEAN	0.076	0.058	0.013	0.003	0.0034	0.00235	0.0008	0.005	0.00034
GEOM. STD. DEV.	2.015	2.820	2.048	1.809	2.0208	2.44801	2.9577	1.831	3.01456
1ST QUARTILE	0.042	0.019	0.006	0.001	0.0018	0.00089	0.0003	0.003	0.00013
2ND QUARTILE	0.062	0.064	0.012	0.002	0.0026	0.00206	0.0006	0.004	0.00028
3RD QUARTILE	0.115	0.105	0.022	0.003	0.0063	0.00496	0.0009	0.007	0.00046

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	11	11	11	13	13	13	13	11	13
MAXIMUM	19.46	7.08	10.83	1.71	0.79	1.16	0.26	1.093	0.298
MINIMUM	3.13	1.79	3.51	0.80	0.37	0.14	0.02	0.058	0.065
RANGE	16.33	5.29	7.32	0.91	0.42	1.02	0.23	1.035	0.233
ARITH. MEAN	9.44	4.44	6.20	1.08	0.52	0.63	0.15	0.197	0.133
ARITH. STD. DEV	5.33	1.80	2.26	0.29	0.13	0.30	0.07	0.300	0.084
GEOM. MEAN	8.10	4.04	5.85	1.05	0.50	0.55	0.13	0.124	0.114
GEOM. STD. DEV.	1.81	1.63	1.42	1.27	1.25	1.80	1.93	2.251	1.704
1ST QUARTILE	4.35	2.27	4.29	0.86	0.43	0.47	0.09	0.070	0.079
2ND QUARTILE	7.71	4.56	5.23	0.97	0.47	0.53	0.14	0.091	0.088
3RD QUARTILE	12.01	5.72	7.06	1.13	0.51	0.78	0.17	0.144	0.118

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	12	13	13	13
MAXIMUM	0.565	0.802	0.049	0.026	0.0047	0.00535	0.0066	0.038	0.00110
MINIMUM	0.095	0.079	0.018	0.006	0.0015	0.00171	0.0003	0.013	0.00014
RANGE	0.469	0.723	0.031	0.020	0.0032	0.00364	0.0063	0.025	0.00096
ARITH. MEAN	0.259	0.277	0.034	0.012	0.0031	0.00321	0.0023	0.028	0.00063
ARITH. STD. DEV	0.137	0.213	0.010	0.006	0.0010	0.00112	0.0015	0.009	0.00026
GEOM. MEAN	0.228	0.218	0.033	0.011	0.0029	0.00304	0.0019	0.026	0.00056
GEOM. STD. DEV.	1.698	2.042	1.367	1.574	1.4510	1.39646	2.1144	1.419	1.73243
1ST QUARTILE	0.152	0.125	0.025	0.008	0.0021	0.00256	0.0015	0.019	0.00044
2ND QUARTILE	0.224	0.209	0.033	0.010	0.0030	0.00300	0.0021	0.026	0.00060
3RD QUARTILE	0.287	0.269	0.037	0.013	0.0039	0.00348	0.0025	0.036	0.00078

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/CUMULATIVE/LO-VOL 032

PERIOD OF REPORT : APR 23,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	9	9	9	9	9	9	9	9	9
MAXIMUM	0.80	1.67	0.82	0.12	0.16	0.45	0.17	0.502	0.269
MINIMUM	0.12	0.58	0.34	0.04	0.07	0.10	0.02	0.036	0.035
RANGE	0.68	1.09	0.47	0.08	0.09	0.36	0.15	0.466	0.234
ARITH. MEAN	0.41	1.11	0.57	0.08	0.11	0.24	0.08	0.100	0.096
ARITH. STD. DEV	0.25	0.41	0.15	0.03	0.03	0.10	0.05	0.151	0.072
GEOM. MEAN	0.34	1.04	0.56	0.07	0.11	0.23	0.07	0.063	0.079
GEOM. STD. DEV.	2.00	1.48	1.31	1.44	1.28	1.50	1.86	2.217	1.853
1ST QUARTILE	0.17	0.72	0.45	0.05	0.09	0.20	0.04	0.043	0.051
2ND QUARTILE	0.34	1.00	0.57	0.07	0.10	0.22	0.06	0.052	0.066
3RD QUARTILE	0.49	1.35	0.63	0.09	0.13	0.24	0.09	0.056	0.094

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	9	9	9	9	9	9	9	9	9
MAXIMUM	0.422	0.656	0.028	0.014	0.0018	0.00457	0.0214	0.010	0.00135
MINIMUM	0.036	0.016	0.002	0.002	0.0004	0.00127	0.0003	0.000	0.00019
RANGE	0.387	0.640	0.026	0.012	0.0015	0.00329	0.0211	0.009	0.00116
ARITH. MEAN	0.168	0.205	0.009	0.006	0.0014	0.00226	0.0031	0.004	0.00050
ARITH. STD. DEV	0.124	0.198	0.008	0.004	0.0004	0.00119	0.0069	0.003	0.00038
GEOM. MEAN	0.128	0.129	0.007	0.005	0.0013	0.00204	0.0010	0.003	0.00040
GEOM. STD. DEV.	2.265	3.085	2.164	1.790	1.6286	1.58259	3.6170	2.701	1.98946
1ST QUARTILE	0.062	0.053	0.004	0.003	0.0012	0.00141	0.0005	0.002	0.00021
2ND QUARTILE	0.124	0.143	0.007	0.005	0.0014	0.00175	0.0006	0.003	0.00033
3RD QUARTILE	0.209	0.226	0.009	0.005	0.0017	0.00210	0.0014	0.005	0.00054

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL 89

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	10	10	10	13	13	13	13	10	13
MAXIMUM	10.65	4.84	6.07	1.46	1.88	0.94	0.28	0.572	0.347
MINIMUM	0.90	1.00	1.68	0.40	0.13	0.05	0.02	0.029	0.049
RANGE	9.75	3.84	4.39	1.06	1.75	0.89	0.26	0.543	0.299
ARITH. MEAN	5.17	3.28	3.68	0.72	0.48	0.41	0.11	0.118	0.126
ARITH. STD. DEV	3.19	1.16	1.53	0.30	0.44	0.29	0.09	0.162	0.076
GEOM. MEAN	4.11	3.03	3.36	0.67	0.39	0.30	0.07	0.076	0.111
GEOM. STD. DEV.	2.19	1.59	1.59	1.48	1.85	2.55	2.48	2.344	1.623
1ST QUARTILE	2.17	2.38	1.92	0.48	0.27	0.14	0.03	0.040	0.085
2ND QUARTILE	5.27	3.46	3.86	0.64	0.36	0.41	0.08	0.071	0.101
3RD QUARTILE	7.00	3.96	4.62	0.82	0.41	0.50	0.13	0.099	0.127

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	12	13	13	13
MAXIMUM	0.324	0.392	0.050	0.016	0.0075	0.01502	0.0042	0.022	0.00120
MINIMUM	0.032	0.019	0.002	0.002	0.0009	0.00139	0.0003	0.006	0.00023
RANGE	0.292	0.374	0.047	0.014	0.0066	0.01362	0.0039	0.016	0.00097
ARITH. MEAN	0.131	0.137	0.023	0.006	0.0039	0.00445	0.0016	0.015	0.00054
ARITH. STD. DEV	0.098	0.123	0.013	0.004	0.0017	0.00395	0.0010	0.006	0.00025
GEOM. MEAN	0.099	0.091	0.018	0.005	0.0035	0.00350	0.0013	0.014	0.00050
GEOM. STD. DEV.	2.252	2.723	2.205	1.934	1.6895	1.94244	2.0161	1.575	1.53802
1ST QUARTILE	0.041	0.035	0.012	0.003	0.0026	0.00239	0.0010	0.009	0.00037
2ND QUARTILE	0.112	0.101	0.019	0.005	0.0037	0.00323	0.0013	0.016	0.00047
3RD QUARTILE	0.159	0.156	0.028	0.007	0.0043	0.00393	0.0018	0.019	0.00063

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL #15

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	4	4	4	13	13	13	10	5	13
MAXIMUM	8.64	4.25	5.20	0.89	0.70	1.53	0.45	1.904	0.461
MINIMUM	3.85	2.54	3.34	0.36	0.01	0.10	0.04	0.048	0.067
RANGE	4.78	1.71	1.85	0.54	0.69	1.43	0.41	1.856	0.393
ARITH. MEAN	6.57	3.21	4.35	0.59	0.40	0.81	0.21	0.452	0.213
ARITH. STD. DEV	2.07	0.80	0.87	0.18	0.19	0.42	0.13	0.813	0.131
GEOM. MEAN	6.29	3.14	4.29	0.56	0.30	0.66	0.17	0.153	0.178
GEOM. STD. DEV.	1.43	1.27	1.23	1.35	3.37	2.12	2.06	4.340	1.886
1ST QUARTILE	5.02	2.59	3.64	0.44	0.29	0.55	0.09	0.061	0.113
2ND QUARTILE	6.90	3.02	4.44	0.55	0.36	0.70	0.20	0.077	0.178
3RD QUARTILE	8.13	3.83	5.07	0.65	0.51	1.03	0.27	0.116	0.234

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	13	13	13	13	13	12	13	13	13
MAXIMUM	0.255	0.293	0.086	0.022	0.0085	0.00489	0.0041	0.032	0.00108
MINIMUM	0.057	0.044	0.023	0.006	0.0012	0.00127	0.0008	0.006	0.00013
RANGE	0.198	0.249	0.064	0.017	0.0073	0.00362	0.0033	0.026	0.00095
ARITH. MEAN	0.148	0.148	0.040	0.012	0.0037	0.00289	0.0022	0.017	0.00054
ARITH. STD. DEV	0.059	0.074	0.017	0.005	0.0020	0.00128	0.0011	0.007	0.00022
GEOM. MEAN	0.136	0.128	0.038	0.011	0.0033	0.00262	0.0019	0.016	0.00049
GEOM. STD. DEV.	1.566	1.799	1.446	1.460	1.6357	1.60321	1.6447	1.595	1.60472
1ST QUARTILE	0.099	0.082	0.028	0.009	0.0028	0.00160	0.0014	0.013	0.00043
2ND QUARTILE	0.142	0.135	0.038	0.010	0.0031	0.00283	0.0017	0.016	0.00052
3RD QUARTILE	0.185	0.187	0.041	0.015	0.0038	0.00386	0.0029	0.020	0.00058

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TURKEY LAKE/CUMULATIVE/LO-VOL 837

PERIOD OF REPORT : JAN 1,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	10	11	10	11	11	11	11	11	11
MAXIMUM	3.24	2.01	2.15	0.34	0.26	0.50	0.07	0.213	0.150
MINIMUM	0.59	0.54	0.76	0.08	0.08	0.05	0.01	0.024	0.036
RANGE	2.65	1.47	1.40	0.26	0.18	0.45	0.06	0.189	0.113
ARITH. MEAN	1.91	1.35	1.41	0.18	0.18	0.18	0.04	0.062	0.077
ARITH. STD. DEV	1.00	0.54	0.47	0.08	0.05	0.13	0.02	0.053	0.036
GEOM. MEAN	1.64	1.23	1.34	0.16	0.17	0.14	0.03	0.050	0.070
GEOM. STD. DEV.	1.87	1.62	1.42	1.49	1.39	2.08	1.81	1.832	1.557
1ST QUARTILE	0.87	0.66	0.98	0.12	0.14	0.06	0.02	0.030	0.049
2ND QUARTILE	2.02	1.41	1.40	0.15	0.18	0.17	0.04	0.043	0.061
3RD QUARTILE	2.80	1.72	1.67	0.20	0.21	0.22	0.05	0.066	0.095

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	11	11	11	11	11	11	11	11	11
MAXIMUM	0.151	0.170	0.034	0.007	0.0055	0.00437	0.0013	0.011	0.00048
MINIMUM	0.016	0.012	0.001	0.001	0.0007	0.00102	0.0005	0.002	0.00007
RANGE	0.135	0.158	0.033	0.006	0.0048	0.00336	0.0008	0.010	0.00042
ARITH. MEAN	0.068	0.061	0.008	0.004	0.0024	0.00229	0.0008	0.006	0.00028
ARITH. STD. DEV	0.040	0.048	0.010	0.002	0.0013	0.00102	0.0002	0.003	0.00011
GEOM. MEAN	0.057	0.045	0.005	0.003	0.0021	0.00209	0.0008	0.006	0.00026
GEOM. STD. DEV.	1.947	2.363	3.061	1.756	1.7148	1.57360	1.3412	1.768	1.67141
1ST QUARTILE	0.030	0.018	0.002	0.002	0.0014	0.00138	0.0006	0.003	0.00020
2ND QUARTILE	0.064	0.045	0.005	0.003	0.0023	0.00202	0.0008	0.007	0.00028
3RD QUARTILE	0.080	0.085	0.008	0.004	0.0026	0.00259	0.0009	0.008	0.00033

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL #11

PERIOD OF REPORT : JAN 2,85 TO JAN 7,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	6	7	6	8	8	8	8	8	8
MAXIMUM	11.92	4.59	6.48	0.95	0.69	1.26	0.16	1.288	0.289
MINIMUM	1.91	0.80	2.39	0.13	0.11	0.06	0.01	0.020	0.063
RANGE	10.01	3.78	4.09	0.82	0.59	1.19	0.14	1.268	0.226
ARITH. MEAN	5.81	3.22	4.11	0.60	0.34	0.51	0.07	0.240	0.131
ARITH. STD. DEV	4.20	1.49	1.80	0.27	0.17	0.44	0.06	0.426	0.073
GEOM. MEAN	4.62	2.78	3.80	0.52	0.31	0.35	0.05	0.109	0.117
GEOM. STD. DEV.	2.12	1.94	1.55	1.88	1.69	2.74	2.41	3.265	1.643
1ST QUARTILE	2.35	1.18	2.48	0.47	0.27	0.19	0.03	0.065	0.077
2ND QUARTILE	4.14	3.41	3.57	0.56	0.33	0.30	0.05	0.094	0.112
3RD QUARTILE	7.73	4.38	5.16	0.83	0.37	0.91	0.12	0.149	0.158

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	8	8	8	8	8	8	8	8	8
MAXIMUM	0.330	0.435	0.050	0.015	0.0059	0.01002	0.0024	0.025	0.00065
MINIMUM	0.027	0.018	0.001	0.001	0.0017	0.00120	0.0002	0.011	0.00034
RANGE	0.304	0.417	0.049	0.014	0.0042	0.00882	0.0022	0.014	0.00031
ARITH. MEAN	0.150	0.174	0.025	0.007	0.0032	0.00298	0.0014	0.018	0.00047
ARITH. STD. DEV	0.117	0.159	0.020	0.005	0.0014	0.00301	0.0009	0.005	0.00018
GEOM. MEAN	0.109	0.112	0.015	0.006	0.0030	0.00224	0.0010	0.017	0.00046
GEOM. STD. DEV.	2.426	2.930	4.091	2.299	1.5073	2.06650	2.7153	1.342	1.22902
1ST QUARTILE	0.063	0.057	0.010	0.004	0.0021	0.00134	0.0005	0.014	0.00040
2ND QUARTILE	0.105	0.114	0.017	0.005	0.0029	0.00178	0.0015	0.019	0.00046
3RD QUARTILE	0.251	0.298	0.048	0.012	0.0040	0.00320	0.0023	0.022	0.00053

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/LO-VOL 04

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	12	12	12	13	13	11	11	12	13
MAXIMUM	53.27	15.73	29.36	3.30	1.93	2.64	0.45	0.303	0.550
MINIMUM	5.43	2.01	4.29	0.80	0.50	0.19	0.07	0.090	0.070
RANGE	47.84	13.72	25.07	2.58	1.43	2.45	0.37	0.213	0.480
ARITH. MEAN	18.94	7.87	12.09	1.80	1.08	1.13	0.18	0.156	0.251
ARITH. STD. DEV	13.21	4.55	7.23	0.99	0.50	0.72	0.12	0.065	0.159
GEOM. MEAN	15.48	6.56	10.32	1.57	0.97	0.92	0.15	0.145	0.205
GEOM. STD. DEV.	1.95	1.96	1.81	1.72	1.63	2.04	1.83	1.459	1.983
1ST QUARTILE	10.91	4.82	6.41	0.96	0.57	0.65	0.08	0.109	0.106
2ND QUARTILE	14.38	7.03	10.55	1.34	0.93	0.81	0.14	0.134	0.215
3RD QUARTILE	25.36	11.30	16.08	2.38	1.43	1.69	0.24	0.180	0.303

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	11	11	13	13	13	12	13	13	13
MAXIMUM	0.641	0.539	0.146	0.058	0.0119	0.01455	0.0081	0.106	0.00203
MINIMUM	0.096	0.057	0.015	0.006	0.0026	0.00241	0.0002	0.024	0.00027
RANGE	0.545	0.482	0.132	0.052	0.0093	0.01214	0.0078	0.082	0.00177
ARITH. MEAN	0.292	0.258	0.062	0.019	0.0059	0.00583	0.0042	0.056	0.00104
ARITH. STD. DEV	0.145	0.149	0.039	0.016	0.0029	0.00391	0.0024	0.029	0.00053
GEOM. MEAN	0.262	0.217	0.050	0.015	0.0054	0.00494	0.0033	0.049	0.00089
GEOM. STD. DEV.	1.635	1.929	2.037	1.964	1.5892	1.78060	2.4829	1.687	1.84362
1ST QUARTILE	0.191	0.127	0.025	0.009	0.0037	0.00333	0.0025	0.030	0.00057
2ND QUARTILE	0.251	0.217	0.050	0.012	0.0047	0.00461	0.0032	0.043	0.00096
3RD QUARTILE	0.321	0.336	0.081	0.016	0.0066	0.00675	0.0059	0.068	0.00134

PART IV

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/CUMULATIVE/LO-VOL.

PERIOD OF REPORT : JAN 2,85 TO JAN 7,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	19	21	19	27	27	27	27	22	27
MAXIMUM	13.84	5.01	7.53	0.95	0.83	2.67	0.18	1.288	0.289
MINIMUM	1.15	0.80	1.50	0.13	0.11	0.06	0.01	0.020	0.053
RANGE	12.69	4.21	6.03	0.82	0.72	2.61	0.16	1.268	0.237
ARITH. MEAN	4.64	2.83	3.31	0.47	0.30	0.65	0.07	0.144	0.113
ARITH. STD. DEV	3.61	1.20	1.74	0.23	0.16	0.70	0.05	0.259	0.055
GEOM. MEAN	3.66	2.59	2.95	0.42	0.27	0.40	0.06	0.090	0.103
GEOM. STD. DEV.	1.98	1.57	1.61	1.66	1.61	2.78	2.04	2.188	1.534
1ST QUARTILE	2.23	1.94	1.90	0.28	0.19	0.18	0.03	0.061	0.071
2ND QUARTILE	3.07	2.29	2.52	0.42	0.26	0.33	0.05	0.079	0.095
3RD QUARTILE	5.79	3.41	3.92	0.56	0.37	0.87	0.11	0.111	0.136

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	27	27	27	27	27	26	27	27	27
MAXIMUM	0.330	0.435	0.059	0.015	0.0059	0.01002	0.0059	0.025	0.00108
MINIMUM	0.024	0.018	0.001	0.001	0.0008	0.00089	0.0002	0.006	0.00016
RANGE	0.307	0.417	0.058	0.014	0.0051	0.00913	0.0057	0.018	0.00091
ARITH. MEAN	0.129	0.151	0.024	0.006	0.0029	0.00321	0.0013	0.014	0.00049
ARITH. STD. DEV	0.092	0.135	0.015	0.004	0.0013	0.00230	0.0011	0.005	0.00018
GEOM. MEAN	0.100	0.099	0.019	0.005	0.0026	0.00257	0.0010	0.013	0.00046
GEOM. STD. DEV.	2.109	2.625	2.374	1.980	1.5981	1.96275	2.0364	1.459	1.44642
1ST QUARTILE	0.060	0.045	0.012	0.003	0.0018	0.00144	0.0007	0.010	0.00035
2ND QUARTILE	0.089	0.086	0.020	0.005	0.0026	0.00264	0.0011	0.013	0.00048
3RD QUARTILE	0.179	0.221	0.031	0.008	0.0039	0.00401	0.0016	0.016	0.00058

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHEASTERN REGION/CUMULATIVE/LO-VOL.

PERIOD OF REPORT : JAN 1,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	54	61	54	61	61	61	61	61	61
MAXIMUM	10.79	6.28	6.45	0.83	1.00	0.95	0.21	0.501	0.558
MINIMUM	0.59	0.23	0.73	0.04	0.05	0.03	0.01	0.024	0.036
RANGE	10.20	6.05	5.72	0.79	0.96	0.92	0.20	0.477	0.522
ARITH. MEAN	3.04	1.87	2.15	0.23	0.27	0.27	0.06	0.077	0.139
ARITH. STD. DEV	2.24	1.01	1.32	0.17	0.17	0.20	0.04	0.073	0.108
GEOM. MEAN	2.43	1.61	1.86	0.19	0.23	0.20	0.05	0.061	0.111
GEOM. STD. DEV.	1.95	1.82	1.70	1.94	1.70	2.18	1.86	1.860	1.932
1ST QUARTILE	1.49	1.22	1.26	0.13	0.18	0.13	0.04	0.038	0.064
2ND QUARTILE	2.63	1.77	1.76	0.19	0.22	0.20	0.05	0.055	0.105
3RD QUARTILE	3.54	2.32	2.35	0.27	0.30	0.35	0.07	0.081	0.166

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	61	61	61	61	61	61	60	61	61
MAXIMUM	0.346	0.437	0.092	0.032	0.0239	0.02165	0.0054	0.046	0.00340
MINIMUM	0.016	0.010	0.001	0.001	0.0001	0.00055	0.0003	0.002	0.00007
RANGE	0.330	0.427	0.091	0.031	0.0238	0.02110	0.0051	0.044	0.00333
ARITH. MEAN	0.114	0.124	0.017	0.005	0.0052	0.00396	0.0010	0.010	0.00048
ARITH. STD. DEV	0.078	0.112	0.015	0.005	0.0039	0.00421	0.0009	0.007	0.00045
GEOM. MEAN	0.088	0.077	0.012	0.004	0.0040	0.00283	0.0008	0.009	0.00040
GEOM. STD. DEV.	2.142	2.944	2.493	1.929	2.2562	2.16464	1.7319	1.727	1.81867
1ST QUARTILE	0.047	0.029	0.006	0.003	0.0025	0.00184	0.0007	0.006	0.00030
2ND QUARTILE	0.087	0.088	0.013	0.004	0.0042	0.00247	0.0008	0.009	0.00041
3RD QUARTILE	0.151	0.169	0.022	0.006	0.0066	0.00401	0.0010	0.012	0.00055

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/CUMULATIVE/LO-VOL.

PERIOD OF REPORT : JAN 2,85 TO JAN 1,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	60	64	60	66	66	66	66	65	65
MAXIMUM	3.66	3.87	3.12	0.72	0.87	0.63	0.46	1.999	0.660
MINIMUM	0.08	0.13	0.18	0.02	0.01	0.01	0.01	0.003	0.003
RANGE	3.59	3.74	2.94	0.69	0.86	0.62	0.45	1.996	0.657
ARITH. MEAN	0.58	1.18	0.68	0.11	0.14	0.24	0.08	0.104	0.154
ARITH. STD. DEV	0.56	0.70	0.46	0.10	0.11	0.15	0.09	0.265	0.139
GEOM. MEAN	0.42	1.00	0.58	0.08	0.12	0.20	0.06	0.052	0.110
GEOM. STD. DEV.	2.28	1.84	1.73	1.90	1.75	2.03	2.24	2.592	2.419
1ST QUARTILE	0.23	0.65	0.38	0.06	0.10	0.15	0.03	0.033	0.061
2ND QUARTILE	0.45	1.10	0.59	0.09	0.12	0.21	0.05	0.049	0.116
3RD QUARTILE	0.73	1.45	0.81	0.12	0.15	0.30	0.08	0.070	0.168

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	66	66	66	66	66	66	65	66	66
MAXIMUM	0.422	0.927	0.083	0.014	0.0293	0.02239	0.0214	0.051	0.00548
MINIMUM	0.015	0.009	0.001	0.001	0.0003	0.00024	0.0002	0.000	0.00002
RANGE	0.407	0.918	0.083	0.013	0.0290	0.02215	0.0211	0.050	0.00546
ARITH. MEAN	0.098	0.136	0.011	0.004	0.0030	0.00298	0.0016	0.007	0.00050
ARITH. STD. DEV	0.081	0.179	0.013	0.003	0.0041	0.00365	0.0031	0.007	0.00074
GEOM. MEAN	0.072	0.073	0.007	0.003	0.0020	0.00198	0.0009	0.005	0.00032
GEOM. STD. DEV.	2.203	3.075	2.558	1.889	2.3645	2.36350	2.5681	2.186	2.44491
1ST QUARTILE	0.040	0.028	0.004	0.002	0.0011	0.00128	0.0005	0.003	0.00018
2ND QUARTILE	0.071	0.071	0.006	0.003	0.0018	0.00192	0.0008	0.005	0.00029
3RD QUARTILE	0.127	0.130	0.013	0.004	0.0033	0.00298	0.0011	0.009	0.00051

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/CUMULATIVE/LO-VOL.

PERIOD OF REPORT : JAN 2,85 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIN UG/M**3	POTASSIN UG/M**3	SODIUM UG/M**3
# OF SAMPLES	27	27	27	46	46	46	43	28	46
MAXIMUM	11.90	4.48	6.98	1.15	1.46	1.53	0.45	1.904	0.722
MINIMUM	1.15	0.07	0.97	0.11	0.01	0.02	0.01	0.031	0.043
RANGE	10.75	4.41	6.01	1.04	1.46	1.51	0.44	1.873	0.678
ARITH. MEAN	5.26	2.45	3.45	0.47	0.41	0.57	0.10	0.225	0.188
ARITH. STD. DEV	3.26	0.96	1.77	0.22	0.29	0.44	0.09	0.389	0.153
GEOM. MEAN	4.27	2.11	2.99	0.42	0.32	0.40	0.08	0.123	0.145
GEOM. STD. DEV.	1.99	2.14	1.76	1.64	2.25	2.56	2.13	2.567	2.057
1ST QUARTILE	2.25	1.75	1.90	0.32	0.22	0.22	0.04	0.069	0.085
2ND QUARTILE	3.97	2.50	2.96	0.45	0.34	0.41	0.07	0.094	0.138
3RD QUARTILE	8.39	3.13	5.06	0.58	0.47	0.93	0.12	0.181	0.211

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	46	46	46	46	46	45	46	46	46
MAXIMUM	0.321	0.336	0.090	0.054	0.0171	0.01318	0.0320	0.051	0.00220
MINIMUM	0.032	0.024	0.002	0.002	0.0010	0.00025	0.0004	0.002	0.00010
RANGE	0.289	0.313	0.087	0.052	0.0161	0.01293	0.0316	0.049	0.00210
ARITH. MEAN	0.132	0.128	0.034	0.012	0.0041	0.00318	0.0026	0.018	0.00056
ARITH. STD. DEV	0.065	0.082	0.021	0.012	0.0029	0.00253	0.0046	0.011	0.00034
GEOM. MEAN	0.117	0.103	0.028	0.008	0.0034	0.00248	0.0017	0.015	0.00048
GEOM. STD. DEV.	1.694	2.007	2.022	2.164	1.8040	2.09496	2.1095	1.935	1.76172
1ST QUARTILE	0.076	0.060	0.019	0.005	0.0026	0.00156	0.0011	0.010	0.00036
2ND QUARTILE	0.122	0.107	0.030	0.007	0.0032	0.00271	0.0016	0.015	0.00052
3RD QUARTILE	0.182	0.179	0.041	0.014	0.0043	0.00345	0.0029	0.021	0.00063

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/CUMULATIVE/LO-VOL.

PERIOD OF REPORT : DEC 31,84 TO DEC 31,85

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL SULPHUR UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
# OF SAMPLES	57	57	57	65	65	63	63	57	65
MAXIMUM	53.27	15.73	29.36	3.38	1.93	2.64	0.45	1.093	2.823
MINIMUM	0.75	1.00	1.68	0.40	0.13	0.05	0.02	0.029	0.049
RANGE	52.52	14.73	27.67	2.98	1.80	2.60	0.43	1.064	2.774
ARITH. MEAN	10.27	4.99	6.80	1.17	0.66	0.74	0.18	0.148	0.220
ARITH. STD. DEV	8.49	2.98	4.72	0.62	0.41	0.46	0.11	0.163	0.406
GEOM. MEAN	7.67	4.26	5.68	1.05	0.56	0.59	0.14	0.110	0.137
GEOM. STD. DEV.	2.27	1.77	1.81	1.57	1.73	2.14	2.17	2.046	2.163
1ST QUARTILE	5.32	2.81	3.95	0.80	0.39	0.46	0.10	0.074	0.083
2ND QUARTILE	8.15	4.55	5.45	0.99	0.51	0.65	0.15	0.097	0.110
3RD QUARTILE	12.30	5.94	7.75	1.32	0.70	0.97	0.25	0.146	0.164

	IRON UG/M**3	ALUMINUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
# OF SAMPLES	63	63	65	65	65	60	65	64	65
MAXIMUM	0.641	0.851	0.146	0.058	0.0128	0.01502	0.0081	0.106	0.00346
MINIMUM	0.018	0.019	0.002	0.002	0.0009	0.00113	0.0002	0.006	0.00014
RANGE	0.623	0.833	0.144	0.057	0.0119	0.01389	0.0078	0.100	0.00332
ARITH. MEAN	0.226	0.227	0.038	0.012	0.0042	0.00389	0.0024	0.033	0.00078
ARITH. STD. DEV	0.139	0.180	0.024	0.009	0.0026	0.00278	0.0017	0.023	0.00054
GEOM. MEAN	0.180	0.166	0.032	0.009	0.0036	0.00333	0.0019	0.027	0.00064
GEOM. STD. DEV.	2.117	2.356	1.904	1.924	1.7955	1.67448	2.2212	1.912	1.88343
1ST QUARTILE	0.125	0.088	0.022	0.006	0.0024	0.00247	0.0013	0.018	0.00043
2ND QUARTILE	0.204	0.173	0.033	0.009	0.0037	0.00318	0.0020	0.027	0.00064
3RD QUARTILE	0.302	0.293	0.047	0.013	0.0047	0.00419	0.0028	0.040	0.00096

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